

Serial No.: 10/821,520

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AMENDMENT TO THE CLAIMS

1. (Currently Amended) An acoustic transducer comprising:
a frame;
~~a magnet mounted on the frame, where the magnet and the frame forms~~
~~a gap and the magnet produces a magnetic field region in the gap;~~
a sheet of diaphragm material folded into portions comprising:
a substantially planar portion, and
at least one fin portion, where a 90° fold in the sheet of
diaphragm material is adjacent to a 180° fold in the sheet of diaphragm material; and
a voice coil mounted on the fin portion ~~and immersed in the magnetic~~
~~field region.~~

2-3. (Cancelled)

4. (Previously Presented) The acoustic transducer of claim 1,
where two 90° folds in the sheet of diaphragm material are adjacent to a 180° fold in
the sheet of diaphragm material.

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5. (Previously Presented) The acoustic transducer of claim 1, where a first 90° fold in the sheet of diaphragm material is adjacent to a second 90° fold and the second 90° fold is adjacent to a 180° fold in the sheet of diaphragm material.

6. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material is a sheet of electrically non-conductive material.

7. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material comprises a sheet of electrically non-conductive material to which is bonded a conductive trace for the voice coil.

8. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material comprises a sheet of electrically conductive material.

9. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material comprises a polymer material.

10. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material is a sheet of polyethylenenaphthalate material.

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11. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material is a sheet of polyester material.

12. (Original) The acoustic transducer of claim 1, where the sheet of diaphragm material is a sheet of MYLAR.

13-16. (Canceled)

17. (Currently Amended) A low-profile transducer comprising:
a frame;
a sheet of diaphragm material folded into portions comprising:
a projection surface portion, and
a fin portion, where a 90° fold in the sheet of diaphragm material is adjacent to a 180° fold in the sheet of diaphragm material;
a magnet structure mounted on the frame, where ~~the magnet structure and the frame forms a gap and~~ the magnet structure produces a magnetic-field region in the gap; and
an electrically conductive voice coil coupled to the sheet of diaphragm material and extending out of a plane of the projection surface;

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where the voice coil resides at least partially in the magnetic-field region.

18. (Original) The low-profile transducer of claim 17, where the connection is a pliable surround.

19. (Original) The low-profile transducer of claim 17, where the voice coil is mounted on the fin.

20. (Original) The low-profile transducer of claim 19, where the fin extends in a direction substantially perpendicular to the projection surface.

21. (Original) The low-profile transducer of claim 17, where the frame comprises a ferromagnetic material.

22. (Original) The low-profile transducer of claim 17, where the frame comprises a ferromagnetic material, and where the frame provides a return path for a magnetic field generated by the magnet structure.

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23. (Original) The low-profile transducer of claim 17,
where the frame comprises a ferromagnetic material,
where the magnet structure comprises a magnet and a portion of the
frame, and
where the magnetic-field region is formed between the magnet and the
portion of the frame.

24. (Original) The low-profile transducer of claim 17, where the
frame is non-ferromagnetic.

25. (Original) The low-profile transducer of claim 17, where the
frame is non-ferromagnetic and where the magnet structure comprises a magnet and
a ferromagnetic material.

26. (Original) The low-profile transducer of claim 17, where the
frame has a substantially crenellated shape.

27. (Original) The low-profile transducer of claim 17, where the
frame includes a groove.

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28. (Original) The low-profile transducer of claim 17, where the projection surface of the diaphragm is in the shape of a rectangle.

29. (Original) The low-profile transducer of claim 17, further comprising a filler material attached to the projection surface, and a second sheet of material attached to the filler material, where the filler material and the second sheet provide additional rigidity to the projection surface.

30. (Original) The low-profile transducer of claim 17, further comprising a second sheet of material attached to the projection surface.

31. (Original) The low-profile transducer of claim 17, where the frame comprises a groove, and where the magnet structure is adjacent to the groove.

32. (Original) The low-profile transducer of claim 17, where the voice coil comprises an insulated metal wire.

33-34. (Canceled)

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35. (New) The acoustic transducer of claim 1, further comprising:

a magnet;

a voice coil mounted on the fin portion and immersed in a magnetic field from the magnet.

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